



## Bali Usada Meditation Reduces Depressive Symptoms in Senior High School Students in Denpasar

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### **Abstract**

Research on the effectiveness of meditation on various psychological aspects of students has been conducted, however research on the effect of meditation on students' depressive symptoms has yet need to be developed. Depressive symptoms among high school students have impacted on both academic and psychological conditions. This situation requires further investigation on the effects of meditation towards depressive symptoms among high school students. The objective of this study is to determine the impact of meditation on depressive symptoms in high school students in Denpasar. This study was quasi-experimental with control and experimental groups, a total of 63 participants, and was conducted before the pandemic. The meditation technique that applied on was the Bali Usada Meditation. Based on the Independent Samples Test, the researchers found that meditation was proven to significantly reduce the level of depressive symptoms of high school students in Denpasar. The results of this study are expected to be a reference in reducing depressive symptoms in students.

**Keywords:** *Depression; Meditation; Students*

### **Introduction**

Depression has become one of mental health problems that occur in adolescence. The World Health Organization (WHO) reports that, in general, depression is the fourth cause of illness and disability in the age range of 15-19 years (WHO, 2020). The results of research conducted by (Wiens et al., 2017) on adolescents in Canada showed that there was an increase on the prevalence of self-reported mood disorders that occurred in the period 2003 to 2014. Similar results were also reported by (Mojtabai et al., 2016), who found that between 2005 and 2014, there was a significant increase in the incidence of depression and the access to mental health services in American adolescents aged 12 to 20 years. Other similar data are the findings of a study on adolescents in Germany which found that the prevalence of

depressive symptoms in the age range of 12 to 17 years was 8.2% (Wartberg et al., 2018). Other news stated that more students from senior high schools experienced stress, anxiety, and depression and sought psychological help (Harususilo, 2019).

In Indonesia, it was reported that 10,000 people were reported to have died by suicide, and the leading cause of death in the 15-29 years age group (Susanti, 2019). Adolescents with a range of 15-19 years are generally at the high school education level. Based on the results of research conducted by (Hamidah & Mahajudin, 2012), it is stated that the majority of high school students in Surabaya experience depression. This finding is indeed very concerning. In Bali, particularly, the problem of depression in students can be observed from several reports of students committing suicide (Riza, 2020) and students who show behavioral issues related to school problems (Balipuspanews.com, 2019). These findings indicate that adolescents, with their role as students, are prone to experiencing psychological problems, therefore prevention is an essential factor to overcome depression problems.

Depression as structurally divided into three approaches, namely depression as a symptom, depression as a syndrome, and depression as a disorder (Mash & Wolfe, 2005). Depression as a symptom refers to frequent feelings of sadness, hopelessness, or misery. Symptoms of depression often present without serious problems, are relatively common at all ages, and occur in 40% of children and adolescents. But it will be a problem when the sad mood is experienced with an intense and prolonged intensity. The approach to depression as a symptom is used as the focus in this study with the aim of preventing depressive symptoms from getting worse.

Various factors are associated with the emergence of depressive symptoms in high school students, including academic demands, family problems, friendship, and romantic relationship problems, pressure from social media, having a negative mindset, economic issues, lack of support, and other relationship problems (Hamidah & Mahajudin, 2012; Harususilo, 2019; Wartberg et al., 2018). Symptoms of depression are reported to be more common in women than men (Hamidah & Mahajudin, 2012; Mash & Wolfe, 2005; Zhang et al., 2020).

Depression has a negative impact on student well-being, such as lowering sleep quality, causing health problems, low self-esteem, decreased academic performance, low test results, and social interaction problems (IBCCS.org, 2019). Students who experience symptoms of depression are also reported to be prone to developing other psychological issues, such as anxiety problems (Zhang et al., 2020). The many adverse effects of depression on students indicate the need for prevention efforts so that depressive symptoms do not develop into psychological disorders.

One of the depression prevention efforts that are reported to have a positive impact on reducing depression is to practice mindfulness meditation (Carpena et al., 2019; Desrosiers et al., 2014; Parmentier et al., 2019; Saeed et al., 2019). In addition to mindfulness meditation, loving-kindness meditation has also been reported to bring positive results for reducing depression (Hofmann et al., 2011, 2015; Totzeck et al., 2020). The results of previous studies indicate the possibility of implementing meditation as a depression prevention program in Senior High School students. Bali Usada Meditation is one of the most popular meditation programs in Bali. Bali Usada meditation was created by Mr. Merta Ada in 1993, which combines mindfulness meditation and loving-kindness meditation (Ada, 2014). By Combining mindfulness and loving-kindness meditation techniques and long experience and knowledge related to health from the founders, Bali Usada meditation is suspected to reduce depressive symptoms in high school students in Denpasar. It is hoped that the Bali Usada meditation can be one of the programs for preventing depression in high school students in Denpasar in the future. The objective of this study is to determine the impact of the Bali Usada Meditation towards depressive symptoms in high school students in Denpasar.

## Method

The subject in this study were high school students in the SMK Teknas Denpasar who were selected using the two-stage cluster sampling method. The first sampling stage is school selection, and the second stage is selecting two classes to be divided into a control group and an experimental group. The subjects of this study were male and female students aged 15-18 years and had never participated in meditation activities before. The number of participants selected in this study was 64 students, but one student could not follow the procedure until the end, so that the data analyzed were 63 students. There were 26 male students and 37 female students. This research was conducted prior to the Covid-19 pandemic.

Depressive symptoms in this research were measured using the Beck Depression Inventory (BDI). BDI is one of the most popular measurement tools used to measure adolescent depressive symptoms. It consists of 21 statement items with three choices. The Beck Depression Inventory (BDI) has been widely used for research on depression in adolescents. The validity and reliability of the BDI in measuring adolescent depression have been measured on high school students in Surabaya. The result was satisfactory (Hamidah & Mahajudin, 2012). In this research, participants were assessed by BDI before and after meditation.

The meditation program applied on this study was the Bali Usada meditation. It combines both mindfulness and loving-kindness meditation (Ada, 2014). This program conducted into eight sessions over four weeks in total and there were two meetings every week. Subsequently, each session conducted within 90 minutes. Lectures of meditation provided in the first 30 minutes and continued with 30 minutes meditation practice. Discussion and individual assignment allotted in the last 20 minutes of the session. A professional meditation instructor from Bali Usada assisted the whole meditation process. To follow up, students were assigned to home practice meditation and were required to record their experiences into assignment sheets. All the records collected as an evaluation of the meditation practice.

An independent sample test has used to assess the hypothesis and to analyze the differences of the depressive symptoms scores between the control and experimental study groups. If the significance level of the pretest-posttest difference (gain score) in the experimental group is less than 0.05, the hypothesis is accepted. The levels of significance were reported as two-tailed. Additional analysis to determine the effect size of the treatment was calculated following Rosenthal's formula (Field & Hole, 2008), namely:  $r = \sqrt{t^2 / (t^2 + df)}$ .

## Results and Discussion

Table 1 shows that the demographic data in the experimental group had a higher average BDI pretest score (mean=16.09) than the control group (mean=10.87). There is an average difference between the pretest control group and the experimental group of 5,223.

**Table 1. Demographic Data**

	Group	N	Mean	Std. Deviation	Std. Error Mean
PreBDI	Experiment	32	16.09	7.839	1.386
	Control	31	10.87	8.366	1.503
PostBDI	Experiment	32	7.34	5.993	1.059
	Control	31	15.77	7.500	1.347
GainScore	Experiment	32	-8.75	6.555	1.159
BDI	Control	31	4.90	5.243	.942

In the posttest score after treatment meditation was applied, the subjects in the experimental group experienced a decrease in the BDI score of -8.75 (mean= 7.34). The reduction in the BDI score is (as seen from table 2, the significance section with a significance value of .000). Meanwhile, in the control group, the posttest BDI score increased (mean= 15.77) or increased by an average score of 4.90 points.

**Table 2. Data Independent Samples Test**

		Levene's Test for Equality of Variances		t-test for Equality of Means			
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference
PreBDI	Equal variances assumed	.260	.612	2.558	61	.013	5.223
	Equal variances not assumed			2.555	60.429	.013	5.223
PostBDI	Equal variances assumed	.304	.583	-4.937	61	.000	-8.430
	Equal variances not assumed			-4.920	57.353	.000	-8.430
GainScore BDI	Equal variances assumed	.929	.339	-9.112	61	.000	-13.653
	Equal variances not assumed			-9.144	58.915	.000	-13.653

Table 2 shows the results that all data show the homogeneity of the data as indicated by the Levene's Test for Equality of Variances score greater than 0.05. This indicates that the statistical analysis assumption test has fulfilled. From the significance (2-tailed) column, it shows that all significance values are below 0.05 (pretest *p*-value 0.013; posttest *p*-value 0.000; and gain score *p*-value 0.000). That means that there is a significant difference between the average BDI scores in the experimental group and the control group. These results have indicated that the Bali Usada meditation program effectively reduces depressive symptoms of students in the experimental group.

The calculation of the effect size using the formula from Rosenthal in this study resulted in the effect size of meditation being 0.60. According to Cohen (Field & Hole, 2008), An effect size of more than 0.5 is considered to have a strong influence or effect.

The findings in this study are still in line with the results of previous studies that meditation has been shown to be effective in reducing depressive symptoms in high school students who are in their adolescent developmental age. The meditation given has a significant effect on reducing students' depressive symptoms.

The Bali Usada meditation applies the combination of mindfulness and loving-kindness techniques (Ada, 2014). In the Bali Usada meditation, the first three sessions focus on practicing breath awareness and body scan awareness. In the fourth session, students in the experiment group repeated activities at third and were given loving-kindness meditation. At the fifth, sixth, seventh, and eighth sessions, the students will be invited to complete series of mindfulness and loving-kindness meditations. Students were asked to direct attention intentionally and without judgment to the breath in and out and to observe all sensations that arise in the body. Immediate changes occur in the body when attention is directed consciously to a specific body object, helping students to focus the mind during meditation practice (Hasenkamp et al., 2012). With mindfulness practice, students have a connection with their

bodies and become calmer. Mindfulness meditation cognitively reduces depression symptoms, namely reducing rumination and worry in a person and an emotional way, increasing emotional regulation (Jones, 2018; Parmentier et al., 2019).

Meditation helps reduce depression because, in meditation activities, students are invited to direct their attention and awareness to the here and now body condition so that the rumination circle can be stopped (Powell, 2018). Leading awareness and attention to the state of the body facilitates the process of emotional and cognitive regulation in a person (Jones, 2018). The term used by (Jones, 2018) is cognitive reappraisal which is considered one aspect to reduce symptoms of depression. A person who is depressed tends to have repeated negative thoughts about something so that when thoughts and attention are directed to the body, the repetitive thoughts can be stopped. Bali Usada meditation helps students train the mind to become centered, alert, gentle, and wise, or what is called by Bapak Merta Ada, a harmonious mind (Ada, 2014).

Students who have a high level of depressive symptoms are described as having a mood that tends to make it easy to feel sad, lack enthusiasm, and think that their life is suffering (Mash & Wolfe, 2005). When viewed from an emotional approach, mindfulness meditation helps a person practice managing negative emotions that arise to be considered more objectively (Jones, 2018). When students are able to feel and see negative emotions that appear more neutrally, negative emotions do not have control over themselves, and they are able to regulate emotions more adaptively. When meditating, one can observe feelings, sensations, or thoughts that are felt to come to the surface without judgment so that whatever appears is accepted and released, and then there comes peace within (Behan, 2020). When students feel calm, they can do their tasks better, develop more positive relationships with themselves and others.

The Bali Usada meditation closes with the phrase "may all beings be happy." This phrase contains the essence of loving-kindness meditation, which is to radiate love to all living beings. Research conducted by (Fredrickson et al., 2008; Zeng et al., 2015) found that someone applies loving-kindness meditation, positive emotions will be stronger. Positive emotions help reduce the appearance of depressive symptoms, reducing sad emotions and feelings of hopelessness.

In individual assignment sheets, students wrote down the obstacles they experienced in their meditation practice in the early weeks, including difficulty concentrating and body aches. As they continued to practice meditation, the students mentioned that meditation became easier to do. This finding is in line with the explanation from (Buchanan, Teresa, 2017) that meditation requires repeated practice for the body and mind to get used to it.

Overall, the objectives of this study have been answered. The results of this study are also expected to provide an overview of the positive impact of the Bali Usada meditation practice carried out by high school students. Bali Usada meditation can be a source of depression prevention programs based on local wisdom and in accordance with the culture in Denpasar. Discipline in practicing meditation is one of the keys to getting optimal benefits from meditation practice for high school students.

## ***Conclusions***

From the results of this study, the researchers concluded that the Bali Usada meditation effectively reduces depression symptoms in high school students. Bali Usada meditation has a significant effect in reducing depression symptoms of high school students in Denpasar. The results of this study are expected to be an alternative program to prevent more severe psychological disorders in high school students or other groups with characteristics similar to the subjects of this study.

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